

Customer No. 24498
Serial No.:10/516,859
Attorney Docket: PU020269

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Remarks/Arguments

The Office Action mailed January 26, 2007 has been reviewed and carefully considered.

Claim 4 has been amended. Claims 1-17 are pending in this application. No new matter has been added.

Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

Claim objections:

Claim 4 has been objected to for informalities. Claim 4 has been amended to correct these informalities. Reconsideration and withdrawal of the rejection is respectfully requested.

Claim rejections:

Claims 7-11 currently stand rejected under 35 U.S.C. §101 for being directed to non-statutory subject matter.

The Examiner asserts that by not giving examples of "computer readable media", as recited in claim 7, that in the claim "said readable medium is not limited to physical devices and could reasonably include propagating electrical signals which do not fall under statutory subject matter."

The applicant respectfully asserts that the term "computer readable medium" is well known to the patent office, and the possibility that a computer program is propagated through an electrical signal does not render the material non-statutory subject matter.

Applicant respectfully draws the Examiner's attention to MPEP §2106.01, which states:

When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.

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Furthermore, MPEP §2106.01 recognizes that a computer readable medium may include an electromagnetic carrier signal. MPEP §2106.01 further indicates that:

A claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, *and is thus statutory.*"

Applicant respectfully directs the Examiner's attention to page 2, line 14, which states that "[t]he present computer readable medium contains software instructions that..." Thus, the use of a computer readable medium for containing instructions implementing the present principles is fully supported by the specification. Additionally, it is well known to the field of circuit design and software architecture that software must always reside on a computer readable medium. Otherwise, a computer will not be able to read the software, rendering the instructions contained therein useless. It is also well known in the software and circuit design fields that instructions for processing data may be executed in hardware, or in software containing analogous instructions that are run on general purpose computing devices. Thus, the present principles, whether described as software or hardware elements, may be implemented without any undue experimentation in any combination of software and/or hardware.

Thus, computer software that is simply claimed as residing on a computer readable medium does not remove computer software from being patentable.

In light of the foregoing, applicant respectfully requests that the Examiner's rejection of claims 7-11 under 35 U.S.C. §101 be withdrawn.

Claims 1-3, 5, 7, 9-14 and 16 currently stand rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent No. 6,466,832, to Zuqert, et al. The Examiner has cited Zuqert as particularly showing, *inter alia*, "a processor for polling said decoder for a loss of a phase lock in said demodulating of said audio file signal."

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At the outset, applicant respectfully draws the Examiner's attention to Fig. 3 and the accompanying discussion at page 4, lines 14-22 of the current specification. There, and in independent claims 1, 7 and 12, the processor polls the decoder to determine whether the phase lock loop has become unlocked. Upon determining that the phase lock loop has lost the phase lock, the processor of the present principles initiates a reset of the decoder and re-initialization of the phase lock loop to reacquire a phase lock.

In contrast, the relevant passages of Zuqert, as cited by the Examiner, fail to teach, or even suggest, the processor polling the decoder for a loss of phase lock, and reinitializing the phase lock loop. Nowhere does Zuqert contemplate polling a processor, and nowhere does Zuqert contemplate monitoring the phase lock condition.

Instead, Zuqert teaches that after a receiver locks onto a channel, the receiver fine tunes the *frequency* of the carrier signal. In particular, Zuqert teaches that "preferably, a phase-locked loop (PLL) in signal processor 270 locks onto the CW field of the received packet and thus determines a most desired *frequency* to which to tune." Thus, the phase locked loop of Zuqert is used to fine tune the local oscillator, which, in turn, varies the local reference frequency to a frequency more closely aligned with that of the carrier frequency.

Additionally, nowhere in the passages cited by the Examiner does Zuqert mention polling a decoder to determine if the phase locked loop has lost the lock on the phase of the carrier signal. Zuqert, in fact, teaches away from such polling for a lost phase lock. In Zuqert, a phase lock would be necessary to determine the optimum local reference frequency, whereas the present principles preferably use the phase lock loop to synchronize the decoder with the phase of the carrier signal.

The present claims are concerned with a phase lock loop that *does not* have a lock on the carrier frequency. Zuqert does not indicate any step, element, suggestion, or even hint, of monitoring the status of the phase lock in order to re-initialize the phase lock loop upon loss of phase lock. Thus, Zuqert is directed to an apparatus radically different than the elements recited in claims 1, 7 and 12.

Furthermore, regarding claim 7 specifically, Zuqert describes, at column 19, line 47-column 20, line 11, switching channels based on a combination of automatic gain control (AGC) and the cyclic redundancy check (CRC) error rate. Both the AGC and CRC metrics

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are based on the quality of the wireless link. More specifically, "receiver 24 evaluates the AGC level at input amplifier 296 which is indicative of the strength of the signal received" (column 19, lines 49-50) and "[a] high [CRC] error rate indicates that although the signal strength is sufficient, there is interference at the selected frequency, or in the current position or orientation of the receiver." (Column 19, lines 56-59). Zuqert teaches changing receiving frequencies based on the combination of CRC error and AGC level exceeding a predetermined value.

In contrast, claim 7 recites "polling said demodulating for a loss in a phase lock in said demodulating; and resetting and reinitializing said demodulating in reply to said loss in said phase lock." Zuqert does not base the channel changing, and subsequent acquiring of the carrier signal at the new frequency, on the loss of a phase lock as recited in claim 7. Instead, it is clear from the above cited passages, that the teachings of Zuqert are directed to changing channels, and doing so based on incoming signal quality. Claim 7 is directed to a completely different issue.

Where Zuqert manipulates the frequency of the receiver's reference frequency, claims 1, 7 and 12 recite a processor that acts as a watchdog to continuously verify that the receiver is *in phase* with the carrier signal. It is well known within the art of data signal processing that tuning to the *frequency* of a carrier wave, and synchronizing with the *phase* of a carrier wave are separate endeavors, with radically different challenges and goals.

Zuqert cannot, therefore, anticipate, render obvious, or even suggest, the elements of "a processor for polling said decoder for a loss of a phase lock in said demodulating of said audio file signal", "polling said demodulating for a loss in a phase lock in said demodulating and resetting and reinitializing said demodulating in reply to said loss in said phase lock" or "polling said decoding for a loss of a phase lock in said decoding of said audio file signal" as recited in claims 1, 7 and 12, respectively.

In light of the above clarifications and remarks, applicant respectfully request the withdrawal of the Examiners §102(e) rejection of claims 1, 7 and 12. Additionally, claims 2-3 and 5 depend from independent claim 1, claims 9-11 depend from independent claim 7, and claims 13-14 and 16 depend from independent claim 12, and have all of the features of the independent claims from which they depend. Thus, claims 2-3 and 5 are

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patentable over Zuqert for at least the same reasons as independent claim 1, claims 9-11 are patentable over Zuqert for at least the same reasons as independent claim 7, and claims 13-4 and 16 are patentable over Zuqert for at least the same reasons as independent claim 12. The applicant, therefore, respectfully requests the withdrawal of the Examiner's §102(e) rejection of claims 2-3, 5 9-11, 13-14 and 16 for at least the reasons stated above.

Claims 4, 6, 8, 15 and 17 currently stand rejected under 35 U.S.C. §103(a) in view of Zuqert.

Claims 4 and 6 depend from independent claim 1, claim 8 depends from independent claim 7, and claims 15 and 17 depend from independent claim 12. Referring to the above discussion of the failures of Zuqert to teach polling a decoder for phase lock failure, applicant respectfully reiterates that Zuqert is primarily concerned with tuning or changing the receiver frequency, while the present principles, as claimed, are directed to recovering a phase lock loop from the loss of a phase lock. As Zuqert makes no mention of monitoring the phase lock, and, in fact, teaches away from such features, Zuqert cannot render obvious all of the elements of the independent claims, or of any of the dependent claims.

Applicant, therefore, respectfully requests the withdrawal of the Examiner's §103(a) rejection of claims 4, 6, 8, 15 and 17.

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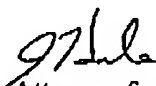
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In view of the foregoing, Applicant respectfully requests that the rejections of the claims set forth in the Office Action of January 26, 2007 be withdrawn, that pending claims 1-17 be allowed, and that the case proceed to early issuance of Letters Patent in due course.

It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to applicant's representatives Deposit Account No.070832.

Respectfully submitted,
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